In the Name of God

The Effect of Reader-generated Questions on the Reading Comprehension of Paramedical Students

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Background (1973-2002)

Among the texts presenting questions as a subsidiary skill for reading comprehension, Finocchiaro and Bonomo's book (1973) is first in line. They labeled the procedure "saturation" and recommended it especially for the first two levels of reading in which students must be helped to develop increasingly automatic visual responses to the graphic shapes they will see in print, or they are helped to read a material in which all the elements are familiar to them. Been (1975) in an attempt to lead students away from a word-by-word decoding process, provided practice in using conceptual clues and especially printed passages for a variety of other purposes, including reading for main ideas and for skimming.(Celce-Murcia and McIntosh,1979). In Been's format, questions come before the passage to direct the students' thought and reduce the processing load of new information.

Henry (1984) states that reader generated questions can help promote active student involvement in literacy activities, comprehension, elicit background knowledge, and help students learn and employ cognitive strategies for understanding text. This activity will typically last for a number of class periods.

Carrell (1985) and Martin (1994) agree that understanding the organization of a text passage is the core of reading comprehension, and questions involving short answer responses and/or fill-ins are comprehension exercises for discovering the organization of a text.

Gafar Samar (1991) used Gradual Approximation Technique of Widdowson(figure-1) to see if the process oriented approach to teaching English as a foreign language can improve the reading comprehension of his experimental group. He found significant difference (P<0.05) between the experimental and control group.

According to Brisk and Harrington (2000), this strategy can facilitate reading comprehension and foster recall by walking students through the steps of the reading process: stimulating background knowledge, predicting, actual reading, and synthesizing. His description of the strategy is as follows:

"First, the subject matter of the reading is presented to the students to provide information, teach key vocabulary explicitly, and allow students to make connections to what they already know. The students then write questions about the subject matter. Students can brainstorm the questions as a class, in pairs, or independently. The next step of the strategy involves the students guessing the answers to the questions. After completing these pre-reading activities, students receive the text to read. The actual reading may occur in a variety of ways. Students may read the text alone, with a partner, in a small group, aloud with the whole class, or even at home. After reading, the students need to check their guessed answers. Students change incorrect answers and expand on answers that need more information. To conclude, students complete a writing assignment to show what they have learned about the subject from reading."

Miciano (2002) conducted an experiment to find out if self-questioning as a reading strategy would help improve comprehension of prose texts in English, a second

language for Filipinos. Following a pretest-posttest design, students enrolled in Developmental Reading were randomly assigned to the control group, which read the assigned text, and the experimental group, which used self-questioning as a reading strategy. The control and experimental groups took the same test in the pretest and posttest and their performances were compared. Overall, the experiment showed that self-questioning **did not** have a significant effect on comprehension of a prose text in English. As there is one important presupposition that "the ability to ask good questions is an essential part of intelligence, and questioning is a sign of critical thinking", why his treatment failed to increase the posttest scores.

Miciano's study suffered time constraint. The readability of the texts, which might have affected the results of the study, was not considered in the study and despite the researcher's effort to state the test items in simple language, the fact that the test was not pretested might have affected the outcome of the experiment

Materials and Method:

The design of this study is based on pretest-posttest equivalent-groups design:

RO1XO2   X gain=O2-O1

RO3CO4   C gain=O4-O3

Subjects were selected based on their course of study and number of terms spent. They also fulfilled the condition of homogeneity in the Tehran University Standardized Placement Test.

The selected students sat for a twenty-item reading comprehension TOEFL test (pretest). They were also asked if they used the following reading strategies to answer the pretest questions:

-analyzing the passage for its structure

- answering the post script questions

-translating the passage

- drawing text-diagrams

-no explicit strategy

-other methods

Then they were randomly assigned into two groups. A three-hour workshop was conducted for the experimental group:

 1- The students were provided with a sample paragraph. A volunteer was asked to write her questions in Farsi on the board. She was recommended to start from the familiar ideas in the paragraph.

2-When she felt no further item can be added to the list, the teacher went through analyzing questions in terms of its structure. There were three categories of questions based on the answers:

- Yes/no answers

- One word answers explicitly stated in the text

- Answers implied from the text

If any inconsistency between answers was encountered, the student tried to reread the problematic section and find a more relevant answer which could go together with the rest of the answers.

3-The last step of the workshop was to rearrange the questions according to paragraph ideas.

4-Another paragraph was given to the whole class. The generation of questions was helped by the teacher and in peer groups.

Next session, both groups (experimental and control) were provided with a twenty-item TOEFL test (posttest). All factors of the pretest and posttest (table- 1) were tried

to be equated. The experimental group determined their attitude toward the strategy when the posttest was over.

The readability of chosen passages was measured by Edward Fry Readability Graph. Table -3 summarizes the pretest scores in the control and experimental groups. It confirms the homogeneity of the two group as the F-value does not exceed the critical value at $P<0.05$. Moreover, a Pooled Variance Estimate of T-value shows there was no significant difference between the pretest scores in the experimental and control group.

Table -4 summarizes the posttest scores in the control and experimental groups. A Separate Variance Estimate (because the F-value exceeds the critical value at $P<0.05$) of T-value shows the posttest mean score in the experimental group was significantly higher than that of the control group ($P<0.05$).

It was also noticed that the experimental group reaction toward the treatment was 2/23 negative, 2/23 impartial, and 19/23 positive.

To assure that both groups were homogeneous with respect to the intervening variable; reading behavior, an ANOVA test was done. The null hypothesis of "there is no significant difference in the scores in terms of the reading behavior of the students in the control and experimental groups" was not rejected (Table- 4).

Conclusion:

Reader-generated questions on a passage helped the comprehension of this study subjects. The subjects also rated the strategy positive.

As a final note, it should be mentioned that the mastery of a strategy should not displace reading for comprehension.

References:

1-Been,S. Reading in the Foreign language teaching program. TESOl Quarterly.9:3, 1975.

2- Best, John. Research in Education. 3rd Edition. USA: Prentice hall.1977

3- Celce-Maurcia and Mcintosh. Teaching English as a Second Language. USA. Newbury house publishers.1979. p: 146

4- Brisk, M. E. & Harrington, M. Literacy and bilingualism: A handbook for ALL teachers. Mahwah, NJ: Lawrence Erlbaum Associates. 2000. pp: 62-63

5- Carrell, P. Facilitating ESL Reading by Teaching Text Structure. TESOL Quarterly.vol1. NO.4, 1985

6-Farhady, Jafarpoor and Birjandi: Language skills testing. Tehran: SAMT Publication. 1995

7- Finocchiaro and Bonomo. The Foreign Language Learner. USA: Regents publishing Company.1973

8- Ghafar Samar, R. The effectiveness of process-oriented approach to Teaching English as a Foreign Language. MA Thesis. Iran: Tarbiat-Modarresss university.1991

9- Henry, R. Reader-generated questions: A tool for improving reading comprehension. TESOL Newsletter (June). (1984). pp.4-5

10- Kazem, Mohammad. Statistical Methods. Tehran: Vajeh publication.1990

11- Matlin, MW. Cognition.USA: Holt Rinehart and Winston.INC.1994

12- Miciano Remedios Z.. Self-Questioning and Prose Comprehension: Asia Pacific Education Review. Vol. 3, No. 2, 210-216. 2002

13- Reading for TOEFL.USA:Educational testing Service .1987

Tables:

Test	Average sentences	Average syllables	Grade	Key words	Time
Pretest	5	147.4	10	provided	60 minutes
posttest	5	158.5	10	provided	60 minutes
Textbook	5	132	7		

Table-1: pretest posttest compared with the freshmen textbook

	Number	Mean	Standard Deviation	Standard Error
Experimental Group	23	8.04	3.00	0.62
Control Group	20	8.25	3.40	0.76

F-value: 1.29

2-tail probability: 0.56

Pooled Variance Estimate:

T-value: -0.21

Df: 41

2-tail probability: 0.83

Table-2: t-test for the pretest scores

	Number	Mean	Standard Deviation	Standard Error
Experimental Group	23	6.70	2.18	0.46
Control Group	20	5.45	1.88	0.42

F-value: 4.42

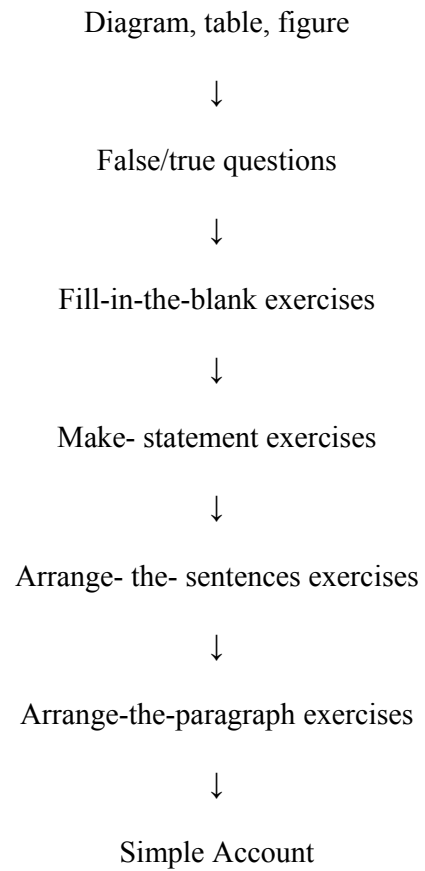2-tail probability: 0.001

Separate Variance Estimate:

T-value: 2.10

Df: 26

2-tail probability: 0.04

Table-3: t-test for the posttest scores

	Pre SS	Post SS	DF	Pre MS	Post MS	Pre F	Post F	Pre P	Post P
Covariate (Reading behavior)	0.05	0.01	1	0.05	0.01	0.04	0.01	0.84	0.91
Main effect (Group)	0.04	3.78	1	0.04	3.78	0.03	3.96	0.85	0.05*
Explained	0.08	3.79	2	0.04	1.90	0.04	1.99	0.96	0.15
Residual	41.92	38.20	40	1.05	0.95				
Total	42	42	42						

Table-4: Two-way ANOVA Test for the scores in terms of the reading behavior of the experimental and control group (SS=Sum of Squares/MS=Mean Square/ F=F-value/ P=P-value)

Figures:

Diagram, table, figure

↓

False/true questions

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Fill-in-the-blank exercises

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Make- statement exercises

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Arrange- the- sentences exercises

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Arrange-the-paragraph exercises

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Simple Account

Figure-1: Gradual Approximation Technique of Widdowson